



*Photo Credit: Northampton Reptile Centre

Oriental Fire Bellied Toad *(Bombina orientalis)*

Hardy, Oriental Trinkets

Fire bellied toads are a group of five or six species of semi aquatic and relatively primitive anurans with a green, warty skin with dark mottling, and a distinct bright red to reddish orange underside, which earns them the name of fire bellied toads. These brightly colored and distinctive toads earn their names from these brightly colored, red, black, or yellow ventral, or belly coloration, which are used as a warning defensive mechanism known as aposematic coloration in which these bright colors are displayed to a potential predator to signal their actual or potential toxicity or distastefulness.

When threatened, these toads can arch their heads and bodies upwards to display their brightly colored underside to potential predators, which is known as the unken reflex. Fire bellied toads are a very inexpensive and hardy amphibian to maintain for the beginning enthusiast or pet owner. Several species in this genus are commonly available as pets in the pet industry, including *B. orientalis*, *B. bombina*, and *B. variegata*, and can be readily and easily be kept in the vivaria provided proper care and environmental conditions.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Amphibia

Order: Anura

Suborder: Archaeobatrachia

Family: Bombinatoridae

Genus: Bombina

Species: *Bombina orientalis**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

If provided the proper care, Oriental fire bellied toads can attain longevity of up to 10 to 15 years, or potentially more.

Distribution and Habitat

The Oriental fire bellied toad is a relatively small, primitive semi-aquatic amphibian which is indigenous to eastern and northeastern Asia, namely from northwestern China, Korea,

Democratic People's Republic of Korea, and the Republic of Russian Federation. Within its range, this species can occur in a variety of habitats, including mixed and/or coniferous-deciduous forests and swamplands, stagnant to slow moving rivers and streams, shallow, well vegetated lakes and ponds, springs and ditches, marshes, and wet, or moist meadows, river valleys, and swampy brushlands.

Origin/History

Bombina orientalis (Boulenger, 1890).

One of the most popular frogs in the world would be the Oriental fire-bellied toad, a species now imported by the thousands from China and Korea. Prior to the early to mid 1990s, Oriental fire-bellied toads were a common sight in any given local aquarium pet store, where they often were the one amphibian tank. By the mid to late 2010's, however, the global amphibian disease crisis became much more widespread with the emergence of *Batrachochytrium dendrobatidis* (Bd). Four lineages of Bd were already known; Europe, Africa, and Brazil each have one, and the fourth—virulent and easily spread—is found everywhere. A new analysis—which involved sequencing the genomes of 177 samples of Bd from around the world—has revealed a fifth lineage in South Korean frogs.

The descendants of Bd have since spread widely, hitchhiking with stowaway amphibians in cargo and others shipped for the pet trade. The Asian lineage, for example, was detected in oriental fire-bellied toads (*Bombina orientalis*) that had been exported to Europe for sale as pets, which lead to greater scrutiny and biosecurity when it came to the availability of Oriental fire bellied toads in the pet trade.

Experience Level Required

Novice/Beginner.

Size

Adult Oriental fire bellied toads reach 1 ½ to 2 inches.

Housing and Enclosure

Enclosure System: Semi-Aquatic. Housing must be sealed and escape proof with a secured top or aquarium hood. A 10 gallon aquarium, terrarium, or other enclosure is suitable for a pair of these toads. They can also be kept communally in proportionally larger housing. A portion of the enclosure should consist of water at around 4 to 6 inches in depth on a gravel substrate. An appropriate filter can be used to help maintain water clarity and cleanliness. Also provide naturalistic basking areas, or other access to dry land in the form of artificial logs, cork bark or slabs, natural or artificial foliage, or rocks. Enclosures should be spot cleaned, sterilized, and cleaned regularly.

Temperature, Lighting, and Humidity

Fire bellied toads have simple and undemanding heating and lighting requirements in captivity, and do not require additional UVA/UVB lighting, although providing it in moderated amounts can be greatly beneficial for their health, immune system, and overall wellness. For any supplemental heating that may be needed, use a low wattage incandescent or UVA/UVB bulb, radiant or ceramic heat emitter, or UTH (under tank heating element). Fire bellied toads can be maintained at adequate temperatures of 75 to 78 degrees F. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well. Humidity is less important with fire bellied toads, as they are mostly semi-aquatic, and can be maintained at most levels at, or above 30%.

Feeding, Diet, and Nutrition

Insectivorous; In the wild, Oriental fire-bellied toads are insectivorous, and will eat insects, arachnids, worms, and other invertebrates they can catch. In captivity, feed Oriental fire-bellied toads a variety of appropriately sized feeder insects such as crickets, roaches, mealworms, earthworms, redworms, and waxworms. They can also be fed microfauna such as springtails, isopods, or fruit fly cultures as well if small enough. Feeder insects should be gut-loaded in order to increase their optimal nutritional value. Fire-bellied toads also require additional calcium and vitamin D3 supplementation 1 to 2 times weekly or as otherwise directed for optimal health and development. This is in order to prevent Metabolic Bone Disease (MBD) and other growth and nutritional deficiencies. Their feeding frequency will depend on the age, size, and overall health of your animal. Use care as to not overfeed them, as obesity and other health related issues can become an issue. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

Handling

Oriental fire bellied toads are delicate and sensitive amphibians, and handling should be avoided or kept to a minimum whenever possible. These toads also possess toxic or irritating skin secretions as well. All amphibians breathe and respire through their skin, as well as absorb water through this means. It is therefore important to avoid wearing any chemicals or lotions on your hands, which can be potentially harmful or even fatal to amphibians. It is also important to wash or rinse hands thoroughly, and ensure they are adequately moistened before and after handling any amphibians in order to prevent them from drying out.

****Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens****

Contact

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact:

Eric.S.Roscoe@gmail.com

Disclaimer: Note that the information provided in these, or any care sheets, are not intended to be all-exhaustive, and further research and care should always be sought and provided when it comes to any species one may prospectively be interested in. These care sheets are also not intended to serve as substitutes for professional veterinary medical care and husbandry should any animal require it. Always seek proper and professional veterinary care for any animal should the need arise, and be prepared ahead of time for any and all husbandry costs and expenses that may occur with any animal beyond the initial purchase. Any animal owned is ultimately a matter of personal/individual care and responsibility. We cannot make any claims or guarantees regarding any information in this care sheet therein. This care sheet may be reprinted or redistributed only in its entirety.

***Copyright, 2023**